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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,249	01/08/2004	Kevin P. Klubek	86973RLO	6740

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EXAMINER	
GARRETT, DAWN L	
ART UNIT	PAPER NUMBER
1774	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/753,249	KLUBEK ET AL.	
	Examiner	Art Unit	
	Dawn Garrett	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *15-17 and 31-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 18-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 18, 2006 has been entered.

2. The amendment previously filed September 19, 2006 has been entered. Claims 1, 2, and 18 were amended. Claims 1-33 are present in the application. Claims 15-17 and 31-33 are withdrawn. Claims 1-14 and 18-30 are presently under consideration.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. It is suggested that the status of co-assigned application "09/753,091" (now U.S. Patent 6,720,090) listed at the beginning of the specification be updated by amendment.

5. Claims 1-10, 13, 14, 18-26, 29, and 30 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US 5,281,489) in view of Matsuura et al. (US 2005/0064233 A1). Mori teaches an electroluminescent element comprising an organic luminescent layer comprising a mixture of a fluorescent luminescent agent, at least one hole moving and donating agent (also known as hole transporting and injecting) and at least one electron moving and donating agent (also known as electron transporting and injecting). Mori teaches suitable hole moving and donating agents include anthracene compounds and aromatic tertiary amine compounds (see col. 4, lines 41-46). Suitable electron moving and donating agents includes metal complexes of 8-

hydroxyquinolines (see col. 8, lines 15-30) with regard to claims 5, 6, 21 and 22. With regard to claims 9, 10, 25 and 26 various coumarin derivatives are taught as the fluorescent agent (see col. 24, lines 3-29). With regard to claims 13 and 29, coumarin is a green emitting material. With regard to claims 8 and 24, the amount of luminescent agent is 0.01-20 parts by weight (see col. 26, lines 66-68). The weight ratio of electron moving and donating agent to hole moving and donating agent is 95:5 to 5:95 (see col. 27, lines 3-5) with regard to claims 3, 4, 7, 19, 20, and 23.

Mori et al. fails to teach the specific aminoanthracene derivative of claims 14 and 30 as a hole moving and donating agent, but Mori et al. does teach the hole moving and donating agent may be an anthracene derivative and/or tertiary amine derivative (see col. 4, lines 41-46). Matsuura et al. teaches in analogous art compounds for the luminescent layer according to formula (V) (see par. 23) wherein X is a substituted or unsubstituted condensed aromatic ring group having 10 to 40 nuclear carbon atoms, Ar^5 and Ar^6 each independently represent a substituted or unsubstituted monovalent aromatic group having 6 to 40 carbon atoms, and p represents an integer of 1 to 4 (see par. 24-26). Although Matsuura et al. does not specifically set forth the derivative of claims 14 and 30, formula (V) discloses all of the requirements of the claims 14 and 30 compound. It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the formula (V) derivative of the luminescent layer taught by Matsuura et al. for the hole moving and donating agent of the Mori et al. device, because Mori et al. teaches that an anthracene derivative or tertiary amine derivative is desirable as the hole moving and donating agent.

6. Claims 10-12 and 26-28 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US 5,281,489) in view of Matsuura et al. (US 2005/0064233 A1) in further

view of Chen et al. (US 2004/0247937 A1). Mori et al. and Matsuura et al. are relied upon as set forth above. Mori et al. teaches the fluorescent materials may be chosen from dyes (see col. 23, lines 38-47), but fails to specifically mention quinacridone dyes or specific coumarin derivative C545T. Chen et al. teaches in analogous art luminescent dyes for the luminescent layer of an OLED including C545T and quinacridone derivatives (see par. 79). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected either a quinacridone dye (QA) or C545T as the luminescent agent of the Mori et al. device, because Mori et al. teaches a fluorescent dye is desirable as the luminescent agent.

Response to Arguments

7. Applicant's arguments filed October 18, 2006 have been fully considered but they are not persuasive.

Applicant argues Mori teaches the anthracene derivatives and tertiary amine derivatives taught by Mori are part of a large number of compounds that can be used as the hole moving agent and there would be no motivation in Mori to use the claimed amino anthracenes. The examiner submits Mori teaches amine derivatives as desirable for the hole moving component and Matsuura clearly teaches amine derivatives. With regard to the secondary reference Matsuura, applicant argues Matsuura uses the amino anthracene to emit light. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The hole moving component in the Mori reference does not emit light. The luminescent agent not the hole moving component is responsible for light

emission in the Mori device. Applicant agrees that "in the OLED art, when a host is used with a dopant, the host is used to moderate charge transport and the dopant is used to emit light" on page 10 of the arguments. In the primary reference, Mori, the amine hole moving agent is not used for light emission.

Hamada et al. (US Pub. No. 2004/0066139 A1), cited of interest with this Office action, further teaches an emission layer of a light emitting device that comprises a mixture of three materials for the emissive layer including a tertiary amine that either acts as a non-luminescent dopant or a host material (in either case the amine derivative does not emit light) (see abstract, par. 16, and par. 19). Amines in a mixed luminescent layer with a luminescent dopant are not expected to be the emitter compounds.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dawn Garrett
Primary Examiner
Art Unit 1774

December 18, 2006